

In the Claims

1-62. (Cancelled)

63. (New) A lentivirus-based retroviral vector production system for producing a replication defective retroviral vector, wherein the retroviral vector production system comprises one or more nucleic acid sequences encoding a genome, gag, pol, and an envelope protein, wherein the retroviral vector production system lacks nucleic acid sequences encoding functional tat, and wherein the retroviral vector production system is capable of producing a replication defective retroviral vector.

64. (New) The retroviral vector production system according to claim 63, wherein tat is absent or disrupted in the vector system and is not functionally expressed in cells.

65. (New) The retroviral vector production system according to claim 63, further comprising a nucleic acid sequence encoding functionally active rev or RRE-type sequences.

66. (New) The retroviral vector production system according to claim 65, wherein at least one RRE-type sequence is a constitutive transport element (CTE).

67. (New) The retroviral vector production system according to claim 66, wherein the CTE is Mason Pfizer monkey virus CTE.

68. (New) The retroviral vector production system according to claim 63, further comprising at least one nucleotide sequence of interest (NOI).

69. (New) The retroviral vector production system according to claim 68, wherein the at least one NOI encodes a therapeutic protein or gene product of interest.

70. (New) A method for producing a replication defective retroviral vector comprising at least one NOI, comprising contacting the retroviral vector production system of claim 68 with a cell, thereby producing the replication defective retroviral vector.

71. (New) An isolated cell comprising the retroviral vector production system of claim 63.

72. (New) A composition comprising the retroviral vector production system of claim 63 and a carrier.

73. (New) The retroviral vector production system according to claim 63, wherein the nucleic acid sequences comprise DNA constructs which encode: (i) the genome, (ii) gag and pol proteins, and (iii) an envelope protein.

74. (New) The retroviral vector production system according to claim 63, wherein the genome comprises an operable promoter.

75. (New) The retroviral vector production system according to claim 74, wherein the promoter is a non-retroviral promoter.

76. (New) The retroviral vector production system according to claim 63, wherein the envelope protein is VSV-G.

77. (New) The retroviral vector production system according to claim 63, wherein the retroviral vector production system is based on HIV-1.

78. (New) A set of isolated nucleic acid sequences encoding the components of the retroviral vector production system according to claim 63, comprising a DNA construct which encodes the genome, a DNA construct which encodes gag and pol proteins, and a DNA construct which encodes an envelope protein.

79. (New) The set of nucleic acid sequences according to claim 78, further comprising a DNA construct which encodes a functionally active rev or RRE-type sequences.

80. (New) The set of nucleic acid sequences according to claim 78, wherein the DNA construct encoding the genome further comprises at least one NOI.

81. (New) A method for producing a replication defective retroviral vector, comprising expressing in a cell the retroviral vector production system according to claim 63, thereby producing the replication defective retroviral vector.